ABSTRACT OF THE DISCLOSURE

A ring of infiltrated cobalt improves the attachment of CBN sintered bodies to its tungsten carbide substrate. A high concentration of cobalt found within the periphery of the CBN sintered body, but concentrated near its edges, creates a lattice of cobalt bonds intermixed with a lattice of CBN bonds and strengthen the connection of the two materials. Our process for improving CBN sintered bodies' attachment comprises of providing a mixture of aluminum grains, aluminum nitride grains, titanium grains, diamond grains and CBN grains to reacts in situ to form a preform of TiC, TiN, Al and CBN. Further, diamond will react as a reducing agent for the oxides found on surface areas of the grains in the mixture. The unique preform treated under high temperature and high pressure while adjacent to a tungsten carbide substrate allows for the cobalt infiltration.